# Cordless Hand Scanner with *Bluetooth*® Wireless Technology

Featuring a Bluetooth enabled bar code scanner and SocketScan software for wirelessly adding bar code scanning to Bluetooth enabled mobile computers running:

- Windows Mobile 2003
- Palm OS 5.2 or later
- Windows XP or Tablet XP

## **User's Guide**







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Feel free to contact SOCKET COMMUNICATIONS at:

**Socket Communications, Inc.** 37400 Central Court Newark, CA 94560

Other than the above, Socket Communications can assume no responsibility for anything resulting from the application of information contained in this manual.

Please refrain from any applications of the Socket Cordless Hand Scanner that are not described in this manual. Please refrain from disassembling the Cordless Hand Scanner. Disassembly of this device will void the product warranty.

You can track new product releases, software updates and technical bulletins by visiting Socket's web page at: <a href="www.socketcom.com">www.socketcom.com</a>.

## **Table of Contents**

1   INTRODUCTION	5
About the Software	5
About Combining Scanning with Bluetooth	5
System Requirements, Package Contents Product Registration, Hardware Features	7 8
•	
2   SETUP FOR WINDOWS MOBILE	10
STEP 1: Install Batteries and Attach Tether	10
STEP 2: Charge the Scanner	11
STEP 4: Install the Sethware	11 12
STEP 4: Install the Software STEP 5: Configure Scanner Settings	14
STEP 5: Connigure Scanner Settings STEP 6: Connect Scanner to Pocket PC via <i>Bluetootl</i>	
STEP 7: Scan Data into Your Application	21
OPTIONAL: Select Symbologies	22
OPTIONAL: Configure Prefix/Suffixes	23
OPTIONAL: Run Scan Demo	24
OPTIONAL: Configure Automatic Connections	25
3   SETUP FOR PALM	27
STEP 1: Install Batteries and Attach Tether	27
STEP 2: Charge the Scanner	28
STEP 3: Uninstall Other Scanning Software	28
STEP 4: Install the Software	29
STEP 5: Connect Scanner to PDA via Bluetooth	31
STEP 6: Scan Data into Your Application	34
OPTIONAL: Configure Scan Settings	35 37
OPTIONAL: Select Symbologies OPTIONAL: Test Bar Codes	38
4   SETUP FOR WINDOWS XP	39
STEP 1: Install Batteries and Attach Tether	39
STEP 2: Charge the Scanner	40
STEP 3: Uninstall Other Scanning Software STEP 4: Install the Software	40 41
STEP 4: Install the Software STEP 5: Connect Scanner to Computer via <i>Bluetooth</i>	
STEP 6: Configure Scanner Settings	48
STEP 7: Scan Data into Your Application	52
OPTIONAL: Assign Sound and Prefix/Suffix Settings	54
OPTIONAL: Configure Advanced Bluetooth Settings	55
OPTIONAL: Assign a Trigger Button	57
OPTIONAL: Select Symbologies	58
OPTIONAL: View Version Information	59

#### **APPENDICES** A | SPECIFICATIONS 60 **B | SAFETY AND USAGE TIPS** 62 C | BAR CODE LABEL SPECIFICATIONS 64 D | ENABLING OR DISABLING SYMBOLOGIES 65 E | DECODE ZONE 68 F | TROUBLESHOOTING 69 **G | TECHNICAL SUPPORT** 71 **LIMITED WARRANTY 72 REGULATORY COMPLIANCE** 74

## 1 | Introduction

If you need to collect bar coded data but don't want to be tied to your mobile or desktop computer, Socket's Cordless Hand Scanner (CHS) with *Bluetooth* wireless technology is just what you're looking for. This innovative device combines the power of laser bar code scanning with the convenience of *Bluetooth* wireless technology in a single compact, lightweight device that is ergonomically designed to fit comfortably in the palm of your hand.



Bar code scanning is the most efficient way to collect data from a mobile computer. If the data to be entered is bar coded, using a laser scanner is 50 times faster and 10,000 times more accurate than manual data entry.

Bluetooth wireless technology transforms how devices connect with each other, offering you new possibilities for using your mobile computer with other devices. With Socket's Cordless Hand Scanner (CHS), you can scan bar codes while connected to the PDA in your pocket or your laptop or desktop located up to 300 feet away — all without the hassle of cables or the awkwardness of a protruding antenna.

#### About the Software



SocketScan

SocketScan<sup>TM</sup> enters scanned data directly into any open Windows or Palm OS program, as if the data were manually typed. You can configure Prefix/Suffixes and assign a beep tone to signify good data reads at the host.



The Socket CHS configuration utility makes it easy to configure SocketScan for use with the Cordless Hand Scanner. Simply identify which kind of *Bluetooth* hardware you will be using on your mobile computer, and SocketScan will automatically search for it when you try to connect.

Note: For Palm OS and Windows XP, the Socket CHS configuration utility is integrated into the SocketScan program.

For software updates, please visit: www.socketcom.com/support/support bar.asp

## About Combining Scanning with Bluetooth

The Cordless Hand Scanner represents an optimal combination of proven laser bar code scanning technology and state-of-the-art *Bluetooth* connectivity. Because of the problems inherent in the intermittent storage of scanned data in on-board memory if the *Bluetooth* connection is lost, the CHS is designed to operate only when connected to the host, with the powerful Class 1 radio providing the maximum possible connection range.

The user is advised of the connection status with a single beep when the CHS connects to the host and a double beep when the connection is closed or lost. As with any wireless device, connectivity range can be affected by a variety of environmental variables.



The most likely source of errors in any cordless scanning system is not in the scanning and decoding process, but in the transmission of the data to the host. For this reason, the beeper and green LED signals provided by the CHS confirm not only a successful scan but also the successful transmission of the scanned data to the host. Users familiar with bar code scanning may notice a slight delay between the successful scan and shut off of the laser and the beep and green LED from the CHS confirming completed transmission of the data. In most instances, this delay is less than 300 ms (milliseconds), but may be slightly longer as the connectivity range limit is approached.



Because of the two-way transmission verification process, it is possible to cause communication problems by scanning bar codes as fast as possible. When this occurs, all transmissions will stop for several seconds before scanning can be resumed. To prevent this from happening, the user should wait until the confirming beep is received before scanning the next bar code.

## **System Requirements**

Your mobile computer should meet these minimum requirements:

- Any of the following operating systems:
  - Windows Mobile 2003
  - Palm OS 5.2 or later
  - Windows XP or Tablet XP
- Any of the following *Bluetooth* stacks:
  - Socket Drakar v1.4 (from Socket SDIO and CF Connection Kits)
  - IVT BlueSoleil v1.4.7 or later (from Socket CF Connection Kit with Adapter or Socket Class 1 USB Adapter)
  - Widcomm v1.4
  - Microsoft Bluetooth stack for Pocket PCs
  - Microsoft Windows XP Service Pack 2

If you are using a Pocket PC or Palm device, during installation you will need a deskop or laptop computer that meets these minimum requirements:

- Windows 98SE, Me, 2000 or XP
- Either Microsoft ActiveSync or Palm Desktop Software

For information about using the CHS with Symbian Series 60 devices, please visit: www.socketcom.com/product/cordless.asp?Type=Scanner

Support for other *Bluetooth* stacks is planned for future releases.

## **Package Contents**

The Socket Cordless Hand Scanner package includes these items:

- Socket Cordless Hand Scanner with Bluetooth Wireless Technology
- AC charging adapter with international plugs
- 2 NiMH rechargeable AAA batteries
- Lanyard with retractable tether
- Software Installation CD
- Booklets with copyright, warranty, and regulatory compliance information



### **Product Registration**

Socket highly recommends that all customers register their Socket products. Product registration is required for technical support. Register online at: www.socketcom.com/prodreg



#### **Hardware Features**

#### **Rechargeable Battery and AC Adapter**

Recharge the internal battery by using the included AC adapter. The adapter rating is 5V, 2A, positive pole center. A fully charged battery should provide roughly 8 hours of normal operation.



WARNING: Charge ONLY NiMH batteries in the CHS. Damage may result if other battery types are charged. Do not store the CHS for more than 30 days with the batteries installed.



The red Battery Status LED will not function properly if standard AAA non-rechargeable batteries are being used..

Besides the included AC adapter, you can also recharge the CHS by using any of the following:

- Socket's Mobile Power Pack. For more information, please visit: <u>www.socketcom.com/product/AC4009-541.asp</u>
- AC and DC adapters of most recent Pocket PCs from Casio, Compaq, Dell, Fujitsu, and Toshiba are also compatible.

#### **Status Indicator LED**

LED	LED Activity	Meaning	
Bluetooth Status (Blue)	1 blink per second	Bluetooth radio is on, but not connected.	
	1 blink per 5 seconds	Bluetooth radio is on, connection established.	
Good Read (Green)	Green	Data successfully scanned and transmitted to host device.	
Battery	1 blink per second	Less than 20% of battery life remaining.	
Status (Red)	Solid red	Batteries are charging.	
	Off when connected to charger	Batteries are fully charged.	

#### **Status Indicator Beeps**

The scanner beeps to signal the *Bluetooth* connection status. Optionally, you can also set the scanner to beep every time it successfully scans data and transmits it to the host device.

LED	Beep Pattern	Meaning		
Bluetooth Status	1 beep	Connection to host device has begun.		
(Blue)	2 beeps	Connection to host device has ended.		
Good Read (Green)	1 beep	Data was successfully scanned and transmitted to host device.		

#### **Touch Screen Stylus**

The touch screen stylus in the tail of the CHS can be removed with small pliers if desired. Visit the Socket website to purchase replacement styli.



WARNING: Do not use the stylus if damaged. A damaged stylus may scratch the display screen of your computer.



The stylus does not work with XP Tablet computers using Active Matrix displays.

## 2 | Setup for Windows Mobile

This chapter explains how to install and use the Cordless Hand Scanner (CHS) with a *Bluetooth* enabled Pocket PC 2003.

## **Setup Summary**

- STEP 1: Install batteries and attach tether.
- STEP 2: Charge the scanner.
- STEP 3: Uninstall other scanning software.
- STEP 4: Install the software.
- STEP 5: Configure scanner settings.
- STEP 6: Connect scanner to Pocket PC via Bluetooth.
- STEP 7: Scan data into your application.

#### **OPTIONAL:**

- Select symbologies.
- Configure prefix/suffixes.
- Run Scan Demo application.
- Configure automatic connections.

#### STEP 1: Install Batteries and Attach Tether

1. Use a coin or screwdriver to unlock and remove the battery cover. Turn the lock underneath the scanner to a horizontal position. Remove the casing.



2. Install the batteries in opposite directions, as indicated by the positive symbols.



WARNING: Do not install the batteries incorrectly. Damage may result.

- 3. If desired, attach the tether. Wrap the string loop around the inside part of the lock.
- 4. Replace the battery cover and lock it into place.
- 5. If desired, attach the tether to a lanyard or belt.

## STEP 2: Charge the Scanner

Use the included AC adapter to charge the Cordless Hand Scanner. The scanner's NiMH batteries must be charged for at least 4 hours before the first use. The Battery Status LED will emit a solid red light while charging, and turn off when the batteries are fully charged.



WARNING: Do not attempt to charge alkaline batteries — this may cause alkaline batteries to leak and damage the CHS.



The red Battery Status LED will not function properly if standard AAA alkaline batteries are being used.

### STEP 3: Uninstall Other Scanning Software

Delete any bar code scanning software you may already have installed on your Pocket PC. You can uninstall either directly from your Pocket PC, or indirectly via ActiveSync.

#### **OPTION 1: Uninstall Directly from the Pocket PC**

- 1. Remove any scanning hardware from the Pocket PC.
- 2. Make sure the bar code scanning software is closed.
- 3. Tap Start | Settings. Tap on the System tab or Control Panel.
- 4. Tap on the Remove Programs icon.
- 5. Select the bar code scanning software, then tap **Remove**.
- 6. Tap Yes to confirm removal of the program.
- 7. Soft reset the Pocket PC by pressing the reset button.

#### **OPTION 2: Uninstall via ActiveSync**

- 1. Make sure the bar code scanning software is closed.
- 2. Use ActiveSync and a serial/Ethernet/USB cable or cradle to make an active connection between your Pocket PC and a host PC.
- 3. On the host PC, open Microsoft ActiveSync.
- 4. Click Tools | Add/Remove Programs.
- 5. Select the bar code scanning software and click Remove.
- 6. In the confirmation screen, click **OK**.
- 7. A screen will ask if you also want to remove the software from the host PC. If desired, click NO to keep a copy of the software on the host PC that can later be re-installed onto a Pocket PC.

#### **STEP 4: Install the Software**

1. Use ActiveSync and a serial/Ethernet/USB cable or cradle to make an active connection between the mobile computer and a host PC.



2. Insert the installation CD into your host PC.



3. Use My Computer or Windows Explorer to access your CD-ROM drive. In the CD, click on SETUP.EXE.



- 4. Follow the instructions on your screen to begin the installation process for Windows CE (also compatible with Windows Mobile 2003).
  - Read the instructions in the Welcome screen, then click Next.
  - In the Main Page, click Install Software.
  - In the Installation screen, click Windows CE.



5. In the File Download screen click Run.



6. If a Security Warning screen appears, click Run.



7. The SocketScan for Windows CE Setup Program will begin. Follow the instructions on your screen to install the software.



8. When software installation is complete, disconnect the Pocket PC from the host PC. Soft reset the Pocket PC by pressing the reset button.

### **STEP 5: Configure Scanner Settings**

1. Start the Socket CHS configuration utility. Tap Start | Settings | System | Socket CHS.

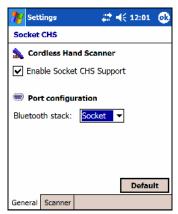


- 2. In the General screen, check the box Enable Socket CHS Support.
- 3. In the Port configuration field, select the *Bluetooth* hardware that you are using with your Pocket PC. Depending on which option you select, additional fields may appear.



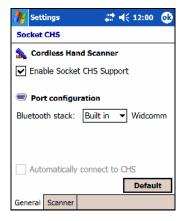
Device information will also appear on the screen if you have previously connected to the CHS.

• Socket: Select if you are using the Socket SDIO/CF Connection Kit.



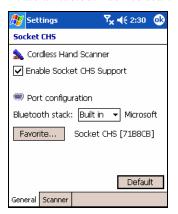
• Built-in: Select if your device has *Bluetooth* built in. The software will automatically detect the type of stack and provide customized fields.

Widcomm: No further settings are required in this screen.



The checkbox
Automatically connect to
CHS will appear gray
until you successfully
connect to the CHS. If
desired, return to the
utility after connecting
and check the box for
your Pocket PC to
automatically connect to
the CHS whenever you
start SocketScan.

<u>Microsoft</u>: You must assign the CHS as your favorite. Tap on the Favorite button to initiate a *Bluetooth* device search.



When the CHS is found, select it from the list and tap OK.



4. Tap on the Scanner tab. Enter the following settings:



- Trigger Operation:
  - Scan always: Select if you would like the CHS to scan whether or not it has a *Bluetooth* connection to the host device.
  - Scan only when connected to host: Select if you would like the CHS to detect a *Bluetooth* connection to the host device before it scans.
     Scanning will be a few milliseconds slower. This option allows the CHS to be triggered remotely if needed.
- Good Read Indicator: Select how would like the scanner to indicate that data has been successfully scanned and transmitted to the host device.
  - Beep: If desired, select the KHz of the beep used to indicate good reads. If operating the CHS in a noisy environment, adjust the KHz as needed.
  - Flash green LED: Check to have the CHS LED flash green to indicate good reads.



The delay in the 'good scan' indicator increases with the distance from the host, giving the user valuable feedback about the strength of the connection.

• CHS Battery Level: No progress bar should appear since you have not yet connected to the CHS. Later, when the CHS is connected to your Pocket PC, you can return to this utility to view the battery level.



- Disable CHS Auto Power Off mode: By default, the CHS will automatically shut off if no *Bluetooth* connection has been established for 20 minutes. Check the box to disable this mode.
- After modifying any settings, tap 0k. If you enabled the Flash green LED setting, the CHS will beep once to confirm. If SocketScan is already open, you must close and reopen SocketScan for the changes to take effect.

#### STEP 6: Connect Scanner to Pocket PC via Bluetooth

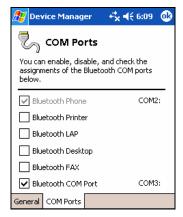
1. Turn on the Cordless Hand Scanner. **Press the small power button for five seconds**, until you see the LED turn blue. The LED should blink blue once every second to show that the *Bluetooth* radio is on but not connected. If the LED begins blinking red, the battery needs to be recharged.



 Prepare the Bluetooth hardware for your Pocket PC. Make sure the Bluetooth radio is turned on. If needed, make sure a COM port is enabled for outbound Bluetooth Serial communications, and note the COM port number. Refer to the documentation for your Bluetooth hardware for instructions.

#### **Socket SDIO or CF Connection Kit**:

- Insert the Socket SDIO or CF Bluetooth card into your Pocket PC.
- Make sure a Bluetooth COM port is enabled. Tap Bluetooth icon |
   Advanced Features | My Bluetooth Device | COM Ports tab. Make sure
   the box Bluetooth COM Port is checked.



• If the COM port cannot be enabled, you need to disable the IrDA port first. Tap Start | Settings | System | IrDA. Follow the instructions to disable the IrDA port, then repeat the instructions above to enable the *Bluetooth* COM port.

3. Start SocketScan. Tap Start | Programs | SocketScan.



#### SocketScan

4. The SocketScan icon should appear in the task tray (visible in the Today screen), indicating that your device is not currently connected to the CHS. Tap on the icon. In the pop-up menu, select Connect CHS.





Your Pocket PC cannot connect to the CHS if another device is assigned as the favorite/default Bluetooth serial device. If needed, remove any such settings.

• If using the Socket SDIO or CF card, from the Bluetooth Devices folder, tap Tools | My Favorites | COM Ports tab.



If the Connect CHS option does not appear, use the Socket CHS configuration utility to enable SocketScan for use with the CHS. See Step 5: Configure Scanner Settings.

5. Your Pocket PC will begin searching for *Bluetooth* enabled devices in range. After it finishes searching, select the CHS from the list of discovered devices. The screen will vary depending on which *Bluetooth* hardware you are using on your Pocket PC.

The Cordless Hand Scanner will appear as Socket CHS [xxxxxx], where the characters in brackets are the last 6 characters of the scanner's *Bluetooth* MAC address.





Socket stack

Widcomm stack, Fujitsu Pocket LOOX



If multiple Cordless Hand Scanners were detected, identify yours by checking the MAC address printed on a label in the battery compartment.



Your screen may vary if you are using different Bluetooth hardware/software.

6. If using the Widcomm stack, you may be prompted to configure automatic connections. Tap Yes or No.



7. Your device will automatically connect to the CHS. If a passkey is requested, enter 1234. To indicate the connection, the CHS will beep once, and the SocketScan icon will change to show an image of the scanner.





Note: If you are using the Socket SDIO or CF card, the Socket Bluetooth icon in the task tray will also begin blinking to indicate that the devices have connected.



If the Pocket PC suspends or the CHS is taken out of range, the Bluetooth connection will be lost. After the Pocket PC comes out of suspend mode or returns within range, SocketScan will try to re-establish the connection every 10 seconds for 30 seconds.



For more information about the meanings of LEDs and beeps, please see page 9.

## **STEP 7: Scan Data into Your Application**

1. Start the Windows application that you want to receive the data (e.g., Excel, Notepad, etc.). Make sure a document or spreadsheet is open.

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		Α		В	С		
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3						Ш	
4							
5							
6							
7						Ш	•
4	III				•	Ш	
Ready Sheet1 ▼ Sum=0 ▼							

2. Press the trigger button and scan the code. For example, try this bar code:

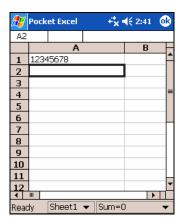


12345678

When data is read and transmitted to the host, the laser will turn off. Depending on the settings you chose in the Socket CHS configuration tool, the scanner may beep and/or the LED may flash green. If the Scanner fails to read data within a few seconds, the laser will turn off, and you must try again.



3. After a successful scan, data should appear in your document. For example, after you scan the code above into a Pocket Excel spreadsheet, data should appear in the first cell. The default "CR" (carriage return) suffix will advance the cursor to the next cell, ready for the next scan.



Note:

Wait for the "Good Scan" indication before you scan another bar code. If you try to scan too fast, the device can lock up until you stop scanning.

If your device enters sleep mode, the Bluetooth connection may be lost, and you may need to re-connect the devices.

For information about bar code scanning applications, please visit: www.socketcom.com/solutions

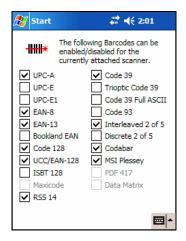
## **OPTIONAL: Select Symbologies**

The applet makes it quick and convenient to modify which symbologies you want the scanner to recognize. By default, the scanner is set to recognize nine of the most common symbologies.

1. Tap on the SocketScan icon. In the pop-up menu, tap Symbology Selector...



2. In the screen that appears, check the symbologies you wish to enable. Uncheck those you wish to disable. Tap **ok**.





Symbologies not supported by the CHS will be grayed out. Enabling all possible symbologies will make the decode process slightly longer.

## **OPTIONAL: Configure Prefix/Suffixes**

The SocketScan applet lets you specify prefix and/or suffix characters to be added automatically to the data you scan. This helps to further eliminate manual data entry.

1. Tap on the SocketScan icon. In the pop-up menu, tap Prefix/Suffix.



You can configure prefix/suffixes whether or not the CHS is connected to your Pocket PC.

2. In the pop-up menu, select Prefix/Suffix...



3. In the screen that appears, enter the characters you want to be appended to each scan (128 character maximum). Tap ok.





Only printable ASCII characters can be used as prefixes or suffixes. The default suffix is a carriage return.

#### **OPTIONAL: Run Scan Demo**

Scan Demo makes it easy to determine the symbology, number of characters, and decoded data (in either ASCII or Hex) of any bar code supported by the scanner. This is especially useful if you encounter a bar code that the scanner will not decode by default.

1. Tap on the SocketScan icon. In the pop-up menu, tap Scan Demo. This will close SocketScan and open Scan Demo as a separate application.





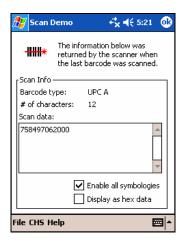
Accessing Scan Demo disconnects the Bluetooth link. If you have not configured the CHS to automatically connect, select the CHS tab at the bottom of the page to re-establish this link.

2. The Scan Demo screen will appear. If desired, use the check boxes at the bottom of the screen to modify the test.

Enable all symbologies: By default, this option is checked. Different symbologies can sometimes interpret the same bar code differently, so you may want to uncheck this option.

**Display as hex data**: Check this box to view scanned data in hexadecimal format. Otherwise, data will appear as ASCII.

3. Scan the bar code. Scan Demo will report the properties of the bar code.



## **OPTIONAL: Configure Automatic Connections**

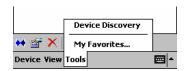
You can only configure automatic connections for Pocket PCs using either Socket's SDIO/CF Connection Kit or a built-in *Bluetooth* stack. The first time you connect your Pocket PC to the CHS, you will be prompted to enable automatic connections.



Afterwards, you can follow the appropriate instructions below to modify settings for automatic connections anytime.

#### **Socket SDIO or CF Connection Kit:**

1. From the Bluetooth Devices folder, tap Tools | My Favorites



2. Tap on the COM Port tab.



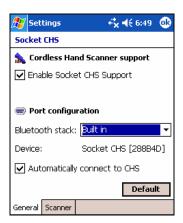
3. To have your Pocket PC automatically connect to the CHS whenever you start SocketScan, select Use the favorite selected above and select Socket CHS [xxxxxx] in the drop-down menu. Tap ok.

#### **Built-in Bluetooth Stack:**

 Start the Socket CHS configuration utility. Tap Start | Settings | System | Socket CHS.



- 2. The General screen should already display the correct *Bluetooth* settings, already used to connect the Pocket PC to the CHS. Device information about the CHS you previously connected to should also be displayed.
- 3. Check the Automatically connect to CHS box to have your Pocket PC automatically connect to the CHS whenever you start SocketScan. Tap ok.



## 3 | Setup for Palm

This chapter explains how to install and use the Cordless Hand Scanner (CHS) with a *Bluetooth* enabled device running Palm OS 5.2 or later.

### **Setup Summary**

STEP 1: Install batteries and attach tether.

STEP 2: Charge the scanner.

STEP 3: Uninstall other scanning software.

STEP 4: Install the software.

STEP 5: Connect scanner to PDA via Bluetooth.

STEP 6: Scan data into your application.

#### OPTIONAL:

- Configure scan settings.
- Select symbologies.
- Test bar codes.



For help using SocketScan, tap on the button on the top of any screen.

#### **STEP 1: Install Batteries and Attach Tether**

1. Use a coin or screwdriver to unlock and remove the battery cover. Turn the lock underneath the scanner to a horizontal position. Remove the casing.



2. Install the batteries in opposite directions, as indicated by the positive symbols.



WARNING: Do not install the batteries incorrectly. Damage may result.

- 3. If desired, attach the tether. Wrap the string loop around the inside part of the lock.
- 4. Replace the battery cover and lock it into place.
- 5. If desired, attach the tether to a lanyard or belt.



## **STEP 2: Charge the Scanner**

Use the included AC adapter to charge the Cordless Hand Scanner. The scanner's NiMH batteries must be charged for at least 4 hours before the first use. The Battery Status LED will emit a solid red light while charging, and turn off when the batteries are fully charged.



Do not attempt to charge alkaline batteries — this may cause alkaline batteries to leak and damage the CHS.



The red Battery Status LED will not function properly if standard AAA alkaline batteries are being used.

### **STEP 3: Uninstall Other Scanning Software**

Delete any bar code scanning software you may already have installed on your device.

- 1. Tap Home, then tap Menu.
- 2. In the App menu, tap Delete.
- 3. In the Delete screen, scroll to select your bar code scanning application. Tap Delete. In the confirmation screen, tap Yes.

#### **STEP 4: Install the Software**

1. Use HotSync and a serial/Ethernet/USB cable or cradle to connect your device to a host PC.



2. Insert the installation CD into your host PC.



3. Use My Computer or Windows Explorer to access your CD-ROM drive. In the CD, click on SETUP.EXE.



- 4. Follow the instructions on your screen to begin the installation process for Palm.
  - Read the instructions in the Welcome screen, then click Next.
  - In the Main Page, click Install Software.
  - In the Installation screen, click Palm OS.



5. In the File Download screen click Run.



6. If a Security Warning screen appears, click Run.



7. The SocketScan Installation program will begin. Follow the instructions on your screen to install the software.



8. When software installation is complete, disconnect the device from the host PC. Soft reset the device by pressing the reset button.

#### STEP 5: Connect Scanner to PDA via Bluetooth

1. Turn on the Cordless Hand Scanner. **Press the small power button for five seconds**, until you see the LED turn blue. The LED should blink blue once every second to show that the *Bluetooth* radio is on but not connected. If the LED begins blinking red, the battery needs to be recharged.



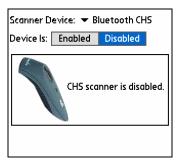
2. Start SocketScan. Tap Home. In the upper right corner, make sure All is selected. Scroll down and tap on the SocketScan icon.



3. The main screen of SocketScan will appear, showing a picture of the Socket SDIO In-Hand Scan Card. In the Scanner Device drop-down menu, select Bluetooth CHS.



4. The screen will display a picture of the Cordless Hand Scanner. In the Device is field, tap Enabled.



5. If you have not yet enabled your *Bluetooth* hardware, a message will ask if you wish to do so. Tap **OK**.



6. Your device will begin searching for *Bluetooth* enabled devices in range. After it finishes searching, select the Socket CHS from the list of discovered devices and tap OK.

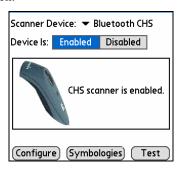


The Cordless Hand Scanner will appear as Socket CHS [xxxxxx], where the characters in brackets are the last 6 characters of the scanner's *Bluetooth* MAC address. If multiple Cordless Hand Scanners were detected, identify yours by checking the MAC address printed on a label in the battery compartment.

7. Your device will connect to the CHS. If a passkey is requested, enter 1234.



8. When the scanner connects to your device, the CHS will beep once. The main screen of SocketScan will also indicate that the scanner is enabled, and the Configure, Symbologies, and Test buttons will appear at the bottom of the screen.





If the PDA suspends, the CHS will automatically re-connect once you turn on the PDA again.



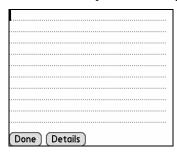
If the CHS is taken out of range, or if the Bluetooth connection is otherwise lost, to resume operation you must enable it again in SocketScan.



For more information about the meanings of LEDs and beeps, please see page 9.

## **STEP 6: Scan Data into Your Application**

1. Start the Palm application that you want to receive the data (e.g., Memo). Make sure a document or spreadsheet is open.



Note: You cannot scan data into Palm Note Pad, because it is a graphics-based program.

2. Press the trigger button and scan the code. For example, try this bar code:



When data is read and transmitted to the host, the laser will turn off. Depending on the settings chosen in the SocketScan Configure screen, the scanner may beep and/or the LED may flash green. If the Scanner fails to read data within a few seconds, the laser will turn off, and you must try again.



3. After a successful scan, data should appear in your document. For example, after you scan the code above into a Memo, data should appear in the first line. The default "CR" (carriage return) suffix will advance the cursor to the next line, ready for the next scan.

123456	78		
Done Details			

Note:

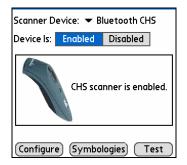
Wait for the "Good Scan" indication before you scan another bar code. If you try to scan too fast, the device can lock up until you stop scanning.

For information about bar code scanning applications, please visit:

www.socketcom.com/solutions

## **OPTIONAL: Configure Scan Settings**

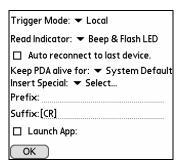
1. Make sure the main screen of SocketScan reports that the CHS is enabled. Tap Configure.





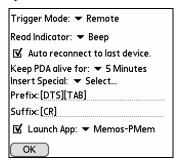
You can configure prefix/suffixes whether or not the CHS is connected to your device.

2. The Configure screen will appear. Enter any settings, as desired:



- Trigger Mode: Select Local to directly trigger the scanner whenever you press the trigger button. Select Remote to have the scanner verify a connection to your PDA before it activates the laser.
- Read Indicator: Select how you would like the CHS to indicate that data was successfully decoded and transmitted to the PDA.
- Auto reconnect to last device: Check to have your PDA automatically connect to the last CHS unit it connected to whenever you tap Enabled in the main screen of SocketScan.
- Keep PDA alive for: Select how long you would like the PDA to stay
  alive after the last scan. This feature allows you to scan data for
  several hours without touching the PDA, as long as you scan at least
  once before the time limit passes. Select System Default to keep your
  PDA alive for the amount of time set as default in the PDA's system
  settings.

• Insert Special: First tap in the Prefix or Suffix field to indicate where you would like to enter special data, such as a date stamp, time stamp, tab, etc. Then tap on the Insert Special drop-down menu and select the type of special data to enter.



- Prefix: Tap to enter characters you would like appended before scanned data (128 character maximum). Besides special data items, only printable ASCII characters can be used.
- Suffix: Tap to enter characters you would like appended after scanned data (128 character maximum). Besides special data items, only printable ASCII characters can be used. The default suffix is a carriage return [CR].
- Launch App: Check the box, then use the drop-down menu that appears to select an application that you would like SocketScan to automatically enter data into whenever you press the trigger button. The application will launch only when you are outside of SocketScan (i.e., SocketScan is running in the background).



If you configured SocketScan to launch an application, whenever you scan data into a document, the data will only be entered after any existing data, no matter where you place the cursor. You will not be able to scan data into the middle of existing data.

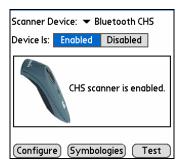
For example, if you already scanned three lines of data into Memo, the next data you scan will appear on the fourth line, even if you place the cursor on a previous line before scanning.

3. After entering any settings, tap **OK** to make the changes take effect.

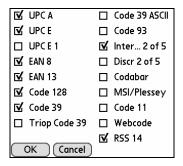
## **OPTIONAL: Select Symbologies**

The feature makes it easy to modify which symbologies you want the scanner to recognize. By default, the scanner is set to recognize eight of the most common symbologies.

1. In the main screen of SocketScan, tap Symbologies.



2. In the screen that appears, check the symbologies you wish to enable. Uncheck those you wish to disable. Tap OK.



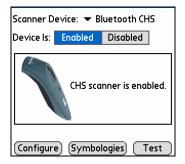


Enabling all possible symbologies will make the decode process slightly longer.

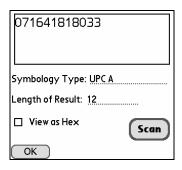
## **OPTIONAL: Test Bar Codes**

SocketScan includes a Test feature that makes it easy to determine the symbology, number of characters, and decoded data (in either ASCII or Hex) of any bar code supported by the scanner. This is especially useful if you encounter a bar code that the scanner will not decode by default.

1. In the main screen of SocketScan, tap Test.



- 2. The Test Scan screen will appear. If desired, check the View as Hex box to view scanned data in hexadecimal format. Otherwise, data will appear as ASCII.
- 3. Scan the bar code. You can either press the trigger button on the CHS, or press the Scan button on the screen. SocketScan will report the properties of the bar code.



4. After you complete your testing, tap **OK**.

# 4 | Setup for Windows XP

This chapter explains how to install and use the Cordless Hand Scanner (CHS) with a *Bluetooth* enabled computer running Windows XP.

# **Setup Summary**

- STEP 1: Install batteries and attach tether.
- STEP 2: Charge the scanner.
- STEP 3: Uninstall other scanning software.
- STEP 4: Install the software.
- STEP 5: Connect scanner to computer via *Bluetooth*.
- STEP 6: Configure scanner settings.
- STEP 7: Scan data into your application.

#### **OPTIONAL:**

- Assign sound and prefix/suffixes.
- Assign a trigger button.
- Select symbologies.

#### STEP 1: Install Batteries and Attach Tether

1. Use a coin or screwdriver to unlock and remove the battery cover. Turn the lock underneath the scanner to a horizontal position. Remove the casing.

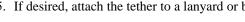


2. Install the batteries in opposite directions, as indicated by the positive symbols.



WARNING: Do not install the batteries incorrectly. Damage may result.

- 3. If desired, attach the tether. Wrap the string loop around the inside part of the lock.
- 4. Replace the battery cover and lock it into place.
- 5. If desired, attach the tether to a lanyard or belt.



# **STEP 2: Charge the Scanner**

Use the included AC adapter to charge the Cordless Hand Scanner. The scanner's NiMH batteries must be charged for at least 4 hours before the first use. The Battery Status LED will emit a solid red light while charging, and turn off when the batteries are fully charged.



WARNING: Do not attempt to charge alkaline batteries this may cause alkaline batteries to leak and damage the CHS.



The red Battery Status LED will not function properly if standard AAA alkaline batteries are being used.

# **STEP 3: Uninstall Other Scanning Software**

Delete any bar code scanning software already on your computer.

- 1. Make sure the bar code scanning software is closed.
- 2. Click Start | Control Panel | Add or Remove Programs.
- 3. Select the bar code scanning software and click Remove.
- 4. Follow the instructions on your screen to remove the software.

#### STEP 4: Install the Software

1. Insert the installation CD into your host PC.



2. Use My Computer or Windows Explorer to access your CD-ROM drive. In the CD, click on SETUP.EXE.



- 3. Follow the instructions on your screen to begin the installation process for Windows XP.
  - Read the instructions in the Welcome screen, then click Next.
  - In the Main Page, click Install Software.
  - In the Installation screen, click Windows XP.



4. In the File Download screen click Run.

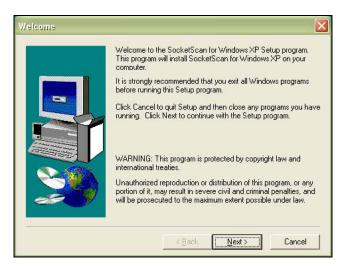


Note: Screens for Internet Explorer 6.0 are shown.

5. If a Security Warning screen appears, click Run.



6. The SocketScan for Windows XP Setup program will begin. Follow the instructions on your screen to install the software.



# STEP 5: Connect Scanner to Computer via Bluetooth



The very first time you connect the CHS to your computer, you must manually connect via your Bluetooth software. Afterwards, you will be able to connect directly from SocketScan by right-clicking on the SocketScan icon and selecting Connect CHS. If desired, you can also configure the devices to automatically connect whenever within range.



1. Turn on the Cordless Hand Scanner. **Press the small power button for five seconds**, until you see the LED turn blue. The LED should blink blue once every second to show that the *Bluetooth* radio is on but not connected. If the LED begins blinking red, the battery needs to be recharged.





For more information about the LEDs and beeps, please refer to page 9.

2. Follow the appropriate instructions for your *Bluetooth* hardware and software to discover and connect to the CHS.

#### Socket Connection Kit with BlueSoleil software:

- Insert the Socket card into your computer, using a CF-to-PC Card adapter, or insert the Class 1 USB Adapter to the USB port.
- Start BlueSoleil. Click on the BlueSoleil icon on your desktop, or click Start | All Programs | IVT BlueSoleil | BlueSoleil.
- Double-click on the red ball to search for the Cordless Hand Scanner, which will appear as Socket CHS [xxxxxx].





The characters in brackets are the last 6 characters of the scanner's Bluetooth MAC address. If multiple Cordless Hand Scanners were detected, identify yours by checking the MAC address printed on a label under the batteries.

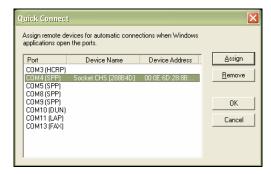
• Double-click on the Socket CHS icon to begin the service discovery. After the Serial Port Service icon is highlighted at the top of the screen, right-click on the Serial Port Service icon and click Connect.



• When the devices connect, the CHS will beep once, and the *Bluetooth* logo in the task tray will turn green.



 Click Tools | Configurations | Quick Connect. Choose a COM port assigned to SPP (Serial Port Profile) and click Assign. In the next screen, select the CHS and click OK. <u>Remember which COM number</u> you assigned to the CHS and click OK.



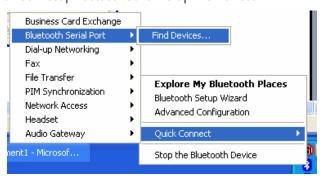
#### WIDCOMM:

To determine if your computer uses a WIDCOMM Bluetooth stack, check the stack version in your *Bluetooth* software. Refer to the documentation for your *Bluetooth* hardware/software for instructions on discovering and connecting to the CHS.



Many Bluetooth USB adapters use the WIDCOMM stack. Although the name may be different, the Bluetooth manager screen will resemble the one shown below.

Perform a Quick Connect to a *Bluetooth* Serial Port. Click on the *Bluetooth* icon in the task tray. In the pop-up menu, click Quick Connect | Bluetooth Serial Port | Find Devices.





It is essential to connect to the CHS via Quick Connect because this sets the CHS as your default Bluetooth serial device.

 During the device discovery, the Cordless Hand Scanner will appear as Socket CHS [xxxxxx]



The characters in brackets are the last 6 characters of the scanner's Bluetooth MAC address. If multiple Cordless Hand Scanners were detected, identify yours by checking the MAC address printed on a label under the batteries.

• If a passkey is requested, enter 1234. To indicate the connection, the CHS will beep once.

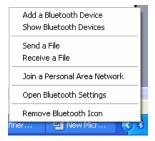


By default, the Bluetooth software will ask you for the passkey each time you connect. To stop the automatic prompts, under Advanced Configuration, disable the Secure Connection requirement for both the Local Service and Client Application, then unpair the devices. Refer to the documentation for your Bluetooth hardware/software.

#### **Microsoft Windows XP Service Pack 2**:

Refer to the documentation for your *Bluetooth* hardware/software for instructions on discovering and connecting to the CHS.

 Use the Add *Bluetooth* Device Wizard to discover and connect to the Cordless Hand Scanner. Click on the *Bluetooth* icon in the task tray. In the pop-up menu, click Add a Bluetooth Device.



 During the device discovery, the Cordless Hand Scanner will appear as Socket CHS [xxxxxx]



The characters in brackets are the last 6 characters of the scanner's Bluetooth MAC address. If multiple Cordless Hand Scanners were detected, identify yours by checking the MAC address printed on a label under the batteries.

- In the passkey options screen, select the option Let me choose my own passkey and enter a passkey of your choice.
- To indicate the connection, the CHS will beep once.
- In the last screen of the Add Bluetooth Device Wizard, note the COM number of the Outgoing COM port.



#### Other Bluetooth Hardware/Software:

Refer to the documentation for your *Bluetooth* hardware/software for instructions on discovering and connecting to the CHS.



Although the CHS may operate correctly with other Bluetooth stacks, Socket has only confirmed compatibility with the Socket, Widcomm, and Microsoft SP2 Bluetooth stacks.

• During the device discovery, the Cordless Hand Scanner will appear as Socket CHS [xxxxxx]



The characters in brackets are the last 6 characters of the scanner's Bluetooth MAC address. If multiple Cordless Hand Scanners were detected, identify yours by checking the MAC address printed on a label under the batteries.

- If a passkey is requested, enter 1234. To indicate the connection, the CHS will beep once.
- Note which COM port is assigned to the Cordless Hand Scanner.
   This is the same COM port used for *Bluetooth* outbound serial communications. For some hardware/software, you need to manually assign the Serial port to the Cordless Hand Scanner.

# **STEP 6: Configure Scanner Settings**

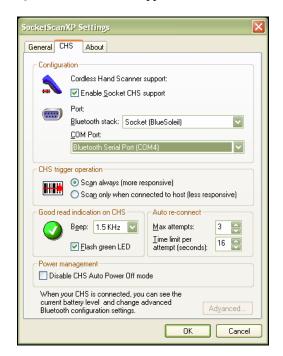
 Start SocketScanXP by clicking on the icon on your desktop. Otherwise, you can click: Start | All Programs | SocketScanXP | SocketScanXP.



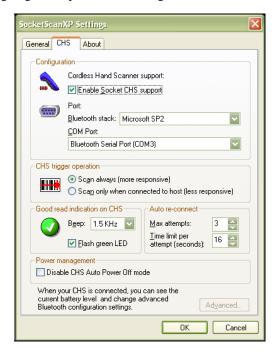
2. The SocketScan icon should appear in the task tray at the bottom of your screen, indicating that your computer has not detected a scanner. Right-click on the icon. In the pop-up menu, click Settings.



- 3. Click on the CHS tab. Check the box Enable Socket CHS support.
- 4. In the Bluetooth stack field, select the Bluetooth hardware used by your computer.
  - Socket BlueSoleil: Select if using Socket's Connection Kit with BlueSoleil.
     In the COM Port field, select the SPP COM port number assigned to the CHS for Quick Connect. It will appear as a Bluelet COM number.



- Widcomm: Select if your computer uses the Widcomm *Bluetooth* stack. Many third-party USB Bluetooth adapters use the Widcomm stack. The COM Port field will not appear for Widcomm.
- Microsoft SP2: Select if your computer uses Microsoft's Windows XP Service Pack 2 *Bluetooth* stack. In the COM Port field, select the Outgoing COM port number assigned to the CHS.



- Other: Select if using an add-on *Bluetooth* adapter not made by Socket. In the COM Port field, select the Serial COM port assigned to the CHS (i.e., the COM port assigned for outgoing *Bluetooth* serial communications).
- 5. If desired, adjust the CHS trigger operation, good read, auto re-connect, and power management options.
  - CHS trigger operation:
    - Scan always: Select if you would like the CHS to scan whether or not it has a *Bluetooth* connection to the host device.
    - Scan only when connected to host: Select if you would like the CHS to detect a *Bluetooth* connection to the host device before it scans.
       Scanning will be a few milliseconds slower. This option allows the CHS to be triggered remotely if needed.

- Good read indication on CHS: Select how you would like the scanner to indicate that data has been successfully scanned and transmitted to the host device. (This is separate from good read indications from the computer, which are configured in the General screen).
  - Beep: If you would like the CHS to beep to indicate good reads, indicate the frequency. If using the CHS in a noisy environment, you may want to adjust the frequency as needed.



The delay in the 'good scan' beep increases with the distance from the host, giving the user valuable feedback about the signal strength of the connection

- Flash green LED: Check if you would like the CHS to flash a green LED to indicate good reads.
- Auto re-connect: Configure how you would like your computer to attempt to automatically re-connect to the CHS in case the *Bluetooth* connection is lost.
  - Max attempts: Indicate how many times you would like your computer to attempt to re-connect to the CHS.
  - Time limit per attempt: Indicate how long you would like each reconnection attempt to last.
- Power management: By default, the CHS will turn off if 20 minutes have passed without any *Bluetooth* connection. Check the Disable CHS Auto Power Off mode box to have the CHS remain on even when 20 minutes have elapsed without a *Bluetooth* connection.
- 6. After modifying any settings, click **OK**.
- As prompted, exit and restart SocketScan to have the changes take effect.



8. Right-click the SocketScan icon at the bottom of the screen and click Connect CHS.





After you configure the correct Bluetooth hardware settings in SocketScan, the Connect CHS menu option allows you to connect to the CHS directly from SocketScan, instead of manually connecting via your Bluetooth software.

The Connect CHS option will not appear unless you checked the box Enable CHS Support in the SocketScanXP settings.

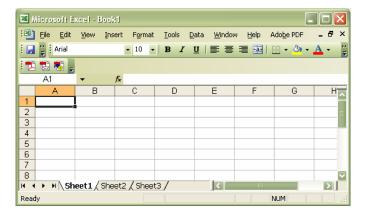
SocketScan will not be able to connect to the CHS if you have another device assigned as your favorite or default Bluetooth serial device. If needed, remove any such settings.

9. The task tray icon at the bottom of your screen will change to indicate that SocketScan has detected (i.e., is connected to) the CHS. The icon will show an image of the scanner.



# **STEP 7: Scan Data into Your Application**

1. Start the Windows application that you want to receive the data (e.g., Excel, Notepad, etc.). Make sure a document or spreadsheet is open.



2. Press the trigger button and scan the code. For example, try this bar code:



When data is read and transmitted to the host, the laser will turn off. Depending on the settings you chose in the SocketScanXP settings, the scanner may beep and/or the LED may flash green.

If the Scanner fails to read data within a few seconds, the laser will turn off, and you must try again.

3. After a successful scan, data should appear in your document. For example, after you scan the code above into an Excel spreadsheet, data should appear in the first cell.





Wait for the "Good Scan" indication before you scan another bar code. If you try to scan too fast, the device can lock up until you stop scanning.

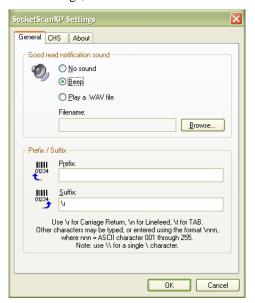
For information about bar code scanning applications, please visit: <a href="https://www.socketcom.com/solutions">www.socketcom.com/solutions</a>

## **OPTIONAL: Assign Sound and Prefix/Suffix Settings**



You can configure these settings whether or not the CHS is connected to your computer.

1. In SocketScanXP Settings, click on the General tab.



2. Adjust any settings as desired:

#### Good read notification sound:

Select which sound you would like your computer to use to indicate good readings of data. By default, your computer will beep.

• If you would like your computer to play a .WAV file, select Play a .WAV file and click Browse to indicate the file location.

#### Prefix/Suffix:

Enter any prefix and/or suffixes you would like SocketScan to automatically append to scanned data (128 character max., printable ASCII characters only). By default, SocketScan will enter a carriage return after every data scan.

- Use \r for Carriage Return, \n for Linefeed, \t for Tab., \\ for a single \\ character.
- Other characters can be typed or entered using the format \nnn, where nnn = ASCII character 001 through 255.
- 3. After adjusting any settings, click **OK**. As prompted, exit and restart SocketScanXP to have your changes take effect.

# **OPTIONAL: Configure Advanced** *Bluetooth* **Settings**

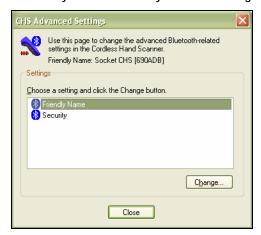
The SocketScanXP utility enables you configure advanced *Bluetooth* settings of the CHS, including the Bluetooth friendly name and security settings.

1. In SocketScanXP Settings, click on the CHS tab.



The Trigger and Barcodes tabs will only appear if you are connected to the CHS.

- 2. At the bottom of the CHS screen, the CHS battery level will be indicated by a status bar. Click **Advanced**.
- 3. The CHS Advanced Settings screen will appear, reporting the current *Bluetooth* friendly name assigned to the CHS.
- 4. If desired, select Friendly Name or Security and click Change.



In the screen that appears, enter any changes and click OK.
 CHS Friendly Name: Enter a new friendly name and click OK.



CHS Security Settings: Enter a PIN code and/or any authentication or encryption settings. If desired, click Delete Bonding to delete any bonding/pairing information in the CHS. After making any changes, click OK.



6. If you modified any security settings, you will be prompted to turn your CHS off and back on to make the changes take effect. Read the message and click OK. Turn the CHS off and back on again.



- 7. When you return to the CHS Advanced Settings screen, click Close.
- 8. In the SocketScanXP Settings screen, click OK.
- 9. Exit and restart SocketScanXP to have your changes take effect.

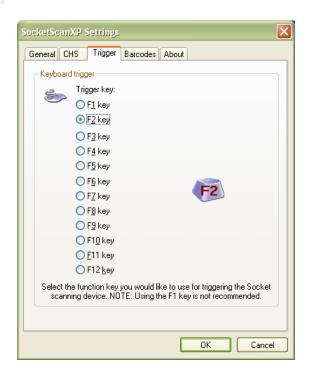
# **OPTIONAL: Assign a Trigger Button**

The SocketScanXP utility enables you to assign one of your computer's function keys to trigger the CHS.

10. In SocketScanXP Settings, click on the Trigger tab.



The Trigger and Barcodes tabs will only appear if you are connected to the CHS.



- 11. Select the function key you would like to use as a trigger key. Click OK.
- 12. As prompted, exit and restart SocketScanXP to have your changes take effect.

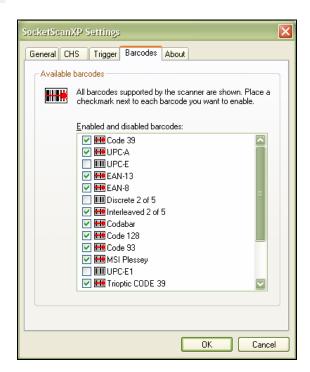
# **OPTIONAL: Select Symbologies**

The SocketScanXP utility makes it easy to modify which symbologies you want the scanner to recognize and decode.

1. In SocketScanXP Settings, click on the Barcodes tab.



The Trigger and Barcodes tabs will only appear if you are connected to the CHS.



2. Check the symbologies you wish to enable. Uncheck those you wish to disable. Click **OK**.



Enabling all possible symbologies will make the decode process slightly longer.

3. As prompted, exit and restart SocketScanXP to have your changes take effect.

# **OPTIONAL: View Version Information**

1. In SocketScanXP Settings, click on the About tab.



The Trigger and Barcodes tabs will only appear if you are connected to the CHS.



2. View the control panel applet (CPL) and CHS firmware version information. Click  $\mathsf{OK}$ .

# Appendix A Specifications

#### Physical Characteristics

Size: 1251 x 31h x 35w (mm) 4.91 x 1.2h x 1.4w (in.)

Total Mass: approx. 90 g (0.2 lb)

Power Source: Two AAA NiMH rechargeable batteries

Expected Battery Life with Normal Operation (connected via Bluetooth and

minimum 2,000 bar code scans): 8 hours

*Operating Temp*: 32 to 120°F (0 to 50°C)

#### **Operating System Support:**

- Windows Mobile 2003 (for Pocket PC 2003), Windows XP, Tablet XP
- Palm OS v5.2 and later

For information about using the CHS with Symbian OS, please visit: <a href="https://www.socketcom.com/product/cordless.asp?Type=Scanner">www.socketcom.com/product/cordless.asp?Type=Scanner</a>

#### 2005 Sunrise Date Compliant

#### Scanning Characteristics

Bar Code Symbologies Decoded: Code 39, UPC/EAN/JAN, MSI, Code 128, Code 93, Codabar, I 2 of 5, D 2 of 5, RSS-14

*Laser*: Class 1 with Fuzzy Logic (Optional Class 2 with Fuzzy Logic) *Scan Angle*: 46.5°

#### Laser Scanner Performance:

Scan Repetition Rate: 50 (± 3) scans/sec (bi-directional)

*Decode Distances*: 2.2 to 40+ inches depends on symbol size, symbology, label media, W-N Ratio, scan angle

#### **Bluetooth Characteristics**

Protocol: Bluetooth 2.45 GHz ISM band frequency hopping

Antenna: Integrated

Radio Range: Up to 330 ft (100 m), depending on environment

Connection: Point-to-point Security: Encrypted link RF Power: Class 1 radio; Typical Output: 14 dbm

#### Certification/Compliance

FCC: Part 15, Class B CE: EN55024:1998

C-TICK: s.182 Bluetooth 1.1 TELEC

ETS 300 328 ETS 300 826

60 | APPENDIX A: SPECIFICATIONS

#### About Bluetooth Range

The Cordless Hand Scanner features a powerful Class 1 *Bluetooth* radio to provide the maximum possible range. As with all wireless technologies, the connection range can vary widely depending on many factors such as the brand and placement of the host device, the type and size of physical obstacles and the presence and activity level of competing radio transmissions.

In range testing of the CHS while connected to a variety of typical host devices with Class 2 radios, functional connection distances from 18 to over 100 feet have been experienced depending on the environment. The following conditions appear to reduce the *Bluetooth* connection range:

- The presence of soft, absorbent materials such as paper, fiberglass insulation, foam material in office cubical walls, carpeting and, to a lesser extent, even sheetrock and wood construction materials. Hard materials such as concrete increase the range.
- Human bodies or containers of liquid positioned between the host and the CHS.
- The presence and activity level of competing *Bluetooth* or 802.11 (Wi-Fi) systems using the same 2.4 GHz frequency.
- Metal in a grid pattern, such as chain link fencing or chicken wire. This type of material may block the *Bluetooth* (or Wi-Fi) signal completely.

# Appendix B Safety and Usage Tips

#### About Bluetooth and Health

Bluetooth wireless technology allows you to use short-range radio signals to connect a variety of devices, such as bar code scanners, mobile phones, Pocket PCs, notebook computers, printers, LAN access points, and many other devices at home or work. These radio signals replace the cables that have traditionally connected these devices.

*Bluetooth* products have small radio transmitters and receivers. Output power is normally very low, only 1 mW (1/1000 of a watt). This gives a working range of approximately 10 meters.

The maximum exposure levels from *Bluetooth* products are far below recommended safety guidelines. At most, typical *Bluetooth* devices (1mW) reach only one percent of the prescribed safety levels.

#### **Product Care**

- Do not expose your product to liquid, moisture or extreme humidity.
- Do not expose your product to extreme high or low temperatures.
- Do not expose your product to lit candles, cigarettes, or cigars, or to open flames, etc.
- Do not drop, throw or try to bend the product, as rough treatment could damage it.
- Do not paint your product, as the paint could obstruct parts and prevent normal use.
- Do not attempt to disassemble your product: a broken warranty seal will
  void the warranty. The product does not contain consumer serviceable
  components. Should your Cordless Hand Scanner need service, please
  contact Socket technical support at: <a href="mailto:support@socketcom.com">support@socketcom.com</a>.
- Treat your product with care. Keep in a clean and dust-free place.
- Changes or modifications of this product, not expressly approved by Socket, may void the user's authority to operate the equipment.

#### **Antenna Care**

Do not place a metallic shield around the Cordless Hand Scanner since it will reduce the radio transmission efficiency.

#### **Efficient Use**

For optimum performance, please make sure that there is no metal surrounding your Cordless Hand Scanner.

#### Driving

RF energy may affect some electronic systems in motor vehicles, such as car stereo, safety equipment, etc. Check with your vehicle manufacturer to be sure that the Cordless Hand Scanner will not affect the vehicle's electronics.

#### **Aircraft**

- Turn off your Cordless Hand Scanner before boarding any aircraft.
- To prevent interference with communications systems, you must not use your Cordless Hand Scanner while the plane is in the air.
- Do not use it on the ground without permission from the crew.

#### **Radio Frequency Exposure**

Your Cordless Hand Scanner contains a radio transmitter and receiver. When in operation, it communicates with a *Bluetooth* enabled mobile computer by receiving and transmitting radio frequency (RF) magnetic fields in the frequency range 2400 to 2500 MHz. The output power of the radio transmitter is 0.001 Watt. The Cordless Hand Scanner is designed to be in compliance with the RF exposure limits set by national authorities and international health agencies when installed or used separately from other antennas or radio transmitters.

ICNIRP, "Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz)", International Commission on Non-Ionizing Radiation Protection (ICNIRP), Health Physics, vol. 74, pp 494-533, April 1998.

99/519/EC, EU Council Recommendation on the limitation of exposure to the general public to electromagnetic fields 0~Hz-300~GHz, Official Journal of the European Communities, July 12, 1999.

ANSI/IEEE C95.1-1992, "Safety levels with respect to human exposure to radio frequency electromagnetic fields, 3 kHz to 300 GHz", The Institute of Electrical and Electronics Engineers, Inc., New York, 1991.

FCC Report and Order, ET Docket 93-62, FCC 96-326, Federal Communications Commission (FCC), August 1996.

Radiocommunications (Electromagnetic Radiation Human Exposure) Standard 1999, Australian Communications Authority (ACA), May 1999.

<sup>&</sup>lt;sup>1</sup> Examples of RF exposure standards and guidelines:

# Appendix C Bar Code Label Specifications

All bar code symbols/labels should satisfy the appropriate AIM Uniform Symbology Specification.

#### **Background Substrate:**

The bar code symbol should be printed on material (media) that is reflective and has a matte (not glossy) finish. A background diffuse reflectance of at least 70% to 80% is desirable for optimum contrast. Retro-reflective media should be used to obtain decode distances greater than 36 inches.

#### Ink Color and Type:

The inked bars should not exceed 25% reflectance at the wavelength that is being used for reading, whether printed with black ink or colored ink. The reflectance value should not vary more than 5% within the same character.

#### Voids and Specks:

The code should be printed clearly, free of voids, specks, blemishes and lines that could "fool" the scanner. Specks or blemishes in the white spaces, or false or missing bar sections could be interpreted by the reading equipment as part of the code. Generally, the width of such flaws is more serious than the height. Code symbols/ labels should be rejected if these defects are present.

#### **Definition:**

The bars in the bar code symbol should be well defined. Their edges should not be rough or fuzzy, so that the bars and spaces have the proper widths intended for the bar code symbology used.

#### **Contrast:**

Background reflectance (that of the substrate on which the codes are printed) should always provide a good contrast relative to the ink reflectance (that of the code bars). The difference between the two should be at least 37.5% at the wavelength used for reading.

#### **Tolerance:**

The ratio of the widths of bars and spaces in a bar code symbol must conform to the appropriate AIM bar code specifications and can cause problems if not correct throughout the bar code. Problems can occur when bar edges are smeared or rough, or when they exhibit voids.

# Appendix D **Enabling or Disabling**Symbologies

The Cordless Hand Scanner is pre-set to automatically detect and decode (auto-discriminate) the most common bar code symbologies. To enable or disable symbologies, simply use SocketScan's Symbology Selector.

#### Notes:

- The length of some symbologies will change after Symbology Selector is used. See Table 1.
- With more symbologies enabled, the scanner must work harder to search through all the possible combinations. This may make the decoding process slightly longer.
- The advanced symbology parameters listed in Table 2 can only be modified by using the SocketScan Advanced Programming Guide or the SocketScan SDK. Check Socket's website for updates.

Table 1. Default Symbologies

Symbology	Scanner Default	Default Length	Length after Symbology Selector
UPC/EAN/JAN			
UPC-A	Enabled	N/A	N/A
UPC-E	Enabled	N/A	N/A
UPC-E1	Disabled	N/A	N/A
EAN-8	Enabled	N/A	N/A
EAN-13	Enabled	N/A	N/A
Code 128 (USS-128 & UCC/EAN 128)	Enabled	Any	Any
Code 39*			
Code 39	Enabled	2 to 23	2 to 55
Trioptic Code 39	Enabled	2 to 23	2 to 55
Code 39 Full ASCII	Disabled	2 to 23	2 to 55
Code 93	Disabled	2 to 38	2 to 55
Interleaved 2 of 5*	Enabled	14 Only	2 to 55
Discrete 2 of 5*	Disabled	12 Only	2 to 55
Codabar	Disabled	5 to 55	2 to 55
MSI Plessey*	Disabled	1 to 30	2 to 55
RSS-14 (Standard, Limited, Expanded)**	Disabled	N/A	N/A

<sup>\*</sup>Warning: Setting the length to "Any" may lead to inaccurate decodes of these symbologies.

<sup>\*\*</sup>This symbology will be added in the next release.

Table 2. Other Symbology Parameters

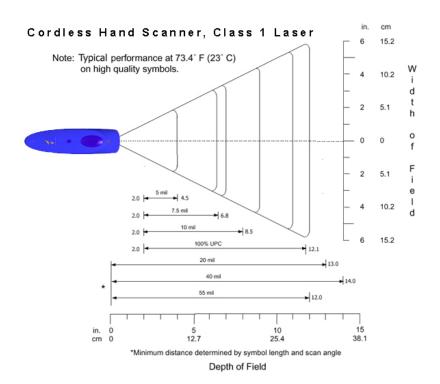
Symbology Parameters	Scanner Default
UPC/EAN/JAN	
Supplementals	Disabled
Transmit Check Digit	Enabled
Bookland EAN	Disabled
Decode UPC/EAN Supplementals	Ignore
UPC/EAN Supplemental Redundancy	Seven
Transmit UPC-A Check Digit	Enabled
Transmit UPC-E Check Digit	Enabled
Transmit UPC-E1 Check Digit	Enabled
Convert UPC-E to A	Disabled
Convert UPC-E1 to A	Disabled
EAN-8 Zero Extend	Disabled
UPC/EAN Security Level	0
UPC/EAN Coupon Code	Disabled
Code 39	
Convert Code 39 to Code 32	Disabled
Code 32 Prefix	Disabled
Check Digit Verification	Disabled
Transmit Check Digit	Disabled
Code 39 Full ASCII	Disabled
Interleaved 2 of 5	
Check Digit Verification	Disabled
Transmit Check Digit	Disabled
Convert I 2 of 5 to EAN-13	Disabled
RSS-14	Disabled
RSS-14 Limited	Disabled
RSS-14 Expanded	Disabled

For more information on bar codes, symbologies, labels or other bar code related topics, visit any of the following web sites:

- a. <a href="www.aimglobal.org/technologies/barcode/">www.aimglobal.org/technologies/barcode/</a>
- b. www.aimglobal.org/aimstore/stackedsymbologies.htm
- c. www.adams1.com
- d. www.bizfonts.com
- e. <a href="www.barcode-us.com/info\_center/upc.htm">www.barcode-us.com/info\_center/upc.htm</a> (UPC Codes)
- f. www.barcode-us.com/info\_center/bookinfo.htm (Bookland EAN)
- g. www.dataid.com/bcsymbology.htm
- h. www.aaabarcodes.com
- i. www.snx.com/mechanics.html
- j. www.pscnet.com/html/aabcsymbologies.htm#Checksums
- k. www.idautomation.com/barcoding4beginners.html

# Appendix E **Decode Zone**

The decode zones for the Cordless Hand Scanner is shown below. The minimum element width ("X Dimension" or bar code "size") is the width in thousandths of an inch (mils) of the narrowest element (bar or space) in the symbol. The figures shown are the typical scanning distances (depths of field) for selected bar code sizes. The maximum usable length of a bar code symbol (Width of Field) at any given range is also shown.



# Appendix F Troubleshooting

For help on SocketScan, tap Start | Help on a Pocket PC, or tap on the icon on a Palm device.



#### **SYMPTOM:**

I get the "No Scanner Detected" (1990) icon in the task tray of my Windows device and can't trigger the laser or scan any bar codes.

POSSIBLE REASON	SOLUTION
Your mobile computer is not connected to the Cordless Hand Scanner.	Make sure the Cordless Hand Scanner is on and in range and has enough battery power. Try to reconnect.

#### **SYMPTOM:**

When I try to scan, the laser activates, but no data appears on my screen, and the laser eventually turns off.

POSSIBLE REASON	SOLUTION
The scanner is too close or too	Practice so you get accustomed
far from the bar code.	the most effective distance and
	scanning angle.
The bar code is incorrectly	Try scanning a bar code that is
formatted or poorly printed.	correctly formatted or printed well,
	such as on a retail package.
The bar code symbology may be	Use Scan Demo for Windows
disabled or not supported by the	Mobile or the Test screen for Palm
Cordless Hand Scanner.	OS to identify the symbology. If
	needed, enable the symbology by
	using Symbology Selector for
	Windows Mobile or the Symbology
	screen for Palm OS.

#### **SYMPTOM:**

My mobile computer cannot find the Cordless Hand Scanner, and/or I get an error message saying that there are connection problems.

POSSIBLE REASONS	SOLUTION
You are too far from the Cordless Hand Scanner.	Move the devices closer together, within a range of 10-15 meters.
The Cordless Hand Scanner is	Turn on the Cordless Hand
not turned on.	Scanner.
You have assigned another	Remove any settings that assign
device as your favorite or default	another device as your favorite
Bluetooth serial device.	Bluetooth serial device.

#### SYMPTOM:

While scanning with the CHS, I turned off the Pocket PC, or my Pocket PC entered suspend mode. Now my Pocket PC won't turn on again.

POSSIBLE REASONS	SOLUTION
This is a known problem with the	Soft reset the Pocket PC by
Widcomm stack (built into HP	pressing the reset button.
h221X iPAQ Pocket PCs with	
ROM version 1.00).	

#### SYMPTOM:

While scanning with the CHS, I turned off the Pocket PC, or my Pocket PC entered suspend mode. Now the CHS won't reconnect to my Pocket PC.

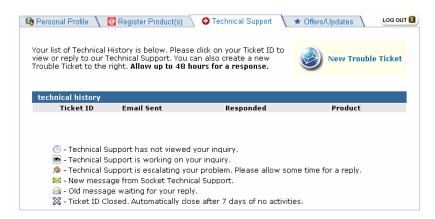
POSSIBLE REASONS	SOLUTION
There is a problem with the	Soft reset the Pocket PC by
Widcomm stack on some Pocket	pressing the reset button.
PCs where the CHS can be	
discovered but fails to	
communicate. Affected units	
include the HP iPAQ models	
h221X with ROM version 1.10	
and h1945.	

# Appendix G Technical Support

If you have trouble installing or using the Cordless Hand Scanner with *Bluetooth* Wireless Technology, contact Socket's technical support department for assistance.

IMPORTANT! To obtain personal assistance from a Socket technical support engineer, you must first register your product online at <a href="https://www.socketcom.com/prodreg">www.socketcom.com/prodreg</a>.

After you register your product and log in, click on the Technical Support tab, then click New Trouble Ticket to submit an online request for technical support. Afterwards , you can log on anytime to monitor the status of your request. If we are unable to resolve your support inquiry online, we can arrange for a technical support representative to call you at a specific time.



Please refrain from disassembling the Cordless Hand Scanner. Disassembly of this device will void the product warranty.

## **Limited Warranty**

Socket Communications Incorporated (Socket) warrants this product against defects in material and workmanship, under normal use and service, for the following period from the date of purchase:

Cordless Hand Scanner: Two years

Incompatibility is not a defect covered by Socket's warranty. During the warranty period, Socket will, at its option, repair or replace the defective product at no charge when furnished with proof of retail purchase, provided that you deliver the product to Socket or to an authorized Socket Service Center.

The returned product must be accompanied by a return material authorization (RMA) number issued by Socket or by Socket's Authorized Service Center. If you ship the product, you must use the original container or equivalent and you must pay the shipping charges to Socket. Socket will pay shipping charges back to any location in the contiguous United States. This warranty applies only to the original retail purchaser and is not transferable.

Socket may, at its option, replace or repair the product with new or reconditioned parts and the returned product becomes Socket's property. Socket warrants the repaired or replaced products to be free from defects in material or workmanship for ninety (90) days after the return shipping date, or for the duration of the original warranty period, whichever is greater.

This warranty does not cover the replacement of products damaged by abuse, accident, misuse or misapplication, nor as a result of service or modification other than by Socket.

SOCKET IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING DAMAGE TO PROPERTY AND, TO THE EXTENT PERMITTED BY LAW, DAMAGES FOR PERSONAL INJURY. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow limitation of implied warranties, or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

This product may contain fully tested, recycled parts, warranted as if new.

For warranty information, phone (510) 744-2700.

## **Limited Software Warranty**

LIMITED WARRANTY. SOCKET warrants that the original disk or CD ROM is free from defects for 90 days from the date of delivery of the SOFTWARE.

CUSTOMER REMEDIES. SOCKET'S entire liability and your exclusive remedy shall be, at SOCKET'S option, either (a) return of the price paid or (b) replacement of the SOFTWARE which does not meet SOCKET'S Limited Warranty and which is returned to SOCKET with a copy of your receipt. Any replacement SOFTWARE will be warranted for the remainder of the original warranty period or 30 days, whichever is longer. THESE REMEDIES ARE NOT AVAILABLE OUTSIDE OF THE UNITED STATES OF AMERICA.

NO OTHER WARRANTIES. SOCKET disclaims all other warranties, either express or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose, with respect to the SOFTWARE and the accompanying written materials. This limited warranty gives you specific legal rights. You may have others which vary from state to state.

NO LIABILITY FOR CONSEQUENTIAL DAMAGES. In no event shall SOCKET or its suppliers be liable for any damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising out of the use of or inability to use the SOFTWARE, even if SOCKET has been advised of the possibility of such damages. Because some states do not allow the exclusion or limitation of liability for consequential or incidental damages, the above limitation may not apply to you.

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CONTROLLING LAW AND SEVERABILITY. This License shall be governed by the laws of the United States and the State of California. If for any reason a court of competent jurisdiction finds any provision, or portion thereof, to be unenforceable, the remainder of this License shall continue in full force and effect.

## Regulatory Compliance

The Socket Cordless Hand Scanner is designed to be compliant with the rules and regulations in locations where they are sold and will be labeled as required. This product is type approved — users are not required to obtain license or authorization before using.

This product has been certified as conforming to technological standards. Therefore, the following actions are punishable by law:

- Disassembly or modification of this product
- Removal of identification labels on the back of the product

The frequency used by this product is also used by industrial, scientific and medical devices, such as microwave ovens, as well as wireless detectors for motion detectors, such as those requiring licenses used on manufacturing lines or similar radio transmitters (all of these wireless devices will be called "other wireless transmitters" below). Most modern electronic equipment (e.g., in hospitals and cars), is shielded from RF energy. However, certain electronic equipment is not.

- 1. Please ensure that all medical devices used in proximity to this device meet appropriate susceptibility specifications for this type of RF energy.
- 2. In the unlikely event that there is electronic interference between this system and other wireless transmitters, quickly change the location of operation or stop operating the unit (cease signal transmission).
- 3. If other electrical interference or related problems occur, contact Socket technical support at support@socketcom.com

#### Radio Frequency Interference Requirements

This device complies with part 15 of the FCC rules and Industry Canada. Operation is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment is also ETS EN300 328-2, ETS EN301 489-1 and ETS EN301 489-17 compliant. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his or her own expense.

This equipment generates and radiates radio-frequency energy. To comply with FCC RF exposure compliance requirements, the following antenna installation and device operating configurations must be satisfied: (1) Users are not permitted to make changes or modify the system in any way, and (2) connecting external antennas to the Cordless Hand Scanner is prohibited. This device and its antenna must not be co-located or operated with any other antenna or transmitter.

To comply with Industry Canada RF exposure compliance requirements, the following antenna installation and device operating configurations must be satisfied: "The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, available at Health Canada's website <a href="www.hc-sc.gc.ca/ehp/ehd/catalogue/rpb.htm">www.hc-sc.gc.ca/ehp/ehd/catalogue/rpb.htm</a>"

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user may try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna of the radio or television.
- Increase the distance separating the equipment and the receiver.
- Connect the equipment to an outlet on a different branch circuit than that
  of the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

The user may find the following booklet helpful: *How to Identify and Resolve Radio-TV Interference Problems*. This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402.

#### **Canada Certification**

The marking of "IC:xxxxxx-yyyyyy" on the device means: "xxxxxx-yyyyyy" is the certification number, and the term "IC" before the equipment certification number only signifies that Industry Canada technical specifications were met.

#### Radio Frequency Interference Requirements – Canada

This Class B digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la Classe B respecte toutes les exigencies du Reglement sur le Matériel Brouilleur du Canada.

NOTE: To comply with FCC and Industry Canada exposure requirements, this device is approved for operations in a user's hand when there is a distance of 20 cm or more between the device antenna and the user's body.

#### CE Marking & European Union Compliance

Products intended for sale within the European Union are marked with a CE Mark which indicates compliance to applicable Directives and European Normes (EN), as follows. Amendments to these Directives or ENs are included: Normes (EN), as follows:

#### **Applicable Directives:**

- Radio and Telecommunications Terminal Equipment Directive 1999/5/EC
- Low Voltage Directive 73/23/EEC

#### **Applicable Standards:**

- EN 55 022 Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment.
- EN 50 082-1 Electromagnetic Compatibility General Immunity Standard, Part 1: Residential, Commercial, Light Industry.
- IEC 801.2 Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment, Part 2: Electrostatic Discharge Requirements.
- IEC 801.3 Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment, Part 3: Radiated Electromagnetic Field Requirements.
- IEC 801.4 Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment, Part 4: Electrical Fast Transients Requirements
- EN 60 950 + Amd 1 + Amd 2 Safety of Information Technology Equipment Including Business Equipment.

#### LASER DEVICE:

Class 1 laser devices are not considered to be hazardous when used for their intended purpose. The following statement is required to comply with U.S. and international regulations:

CAUTION: Use of controls, adjustments or performance of procedure other than those specified herein may result in hazardous laser light exposures.

Class 2 laser scanners use a low power, visible light diode. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a Class 2 laser is not known to be harmful.

#### **Battery Warning:**

- Your device contains a rechargeable NiMH battery. Never throw the battery into a fire, as that could cause the battery to explode.
- Never short-circuit the battery by bringing the terminals in contact with another metal object. This could cause personal injury or a fire, and could also damage the battery.
- Never dispose of used battery with other ordinary solid wastes. Batteries contain toxic substances.
- Dispose of used battery in accordance with the prevailing community regulations that apply to the disposal of batteries. Cover the metal terminals with insulating tape. (This is to prevent accidental short-circuiting).
- Never expose the battery to any liquid.
- Always keep the battery out of reach of infants or small children.
- Never shock the battery by dropping it or throwing it.
- Dispose of a spent or damaged battery promptly.